



west virginia department of environmental protection

Division of Air Quality
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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2888
Plant ID No.: 777-00104
Applicant: Progress Coal Company
Facility Name: Twilight Facility
Location: Whitesville, Boone County
SIC Code: 1221
Application Type: Construction
Received Date: June 09, 2011
Engineer Assigned: Thornton E. Martin Jr.
Fee Amount: \$2,000.00
Date Received: June 16, 2011
Complete Date: July 11, 2011
Applicant Ad Date: June 15, 2011
Newspaper: *Coal Valley News*
UTM's: Easting: 449.83 km Northing: 4196.98 km Zone: 17
Description: This is an after-the-fact application for a portable screening unit that is to be a stand-alone permitted unit and independent of the Twilight facilities permit R13-2199C. This screening unit has been installed and in use at the site since January of 2005.

DESCRIPTION OF PROCESS

A portable coal screening unit has been installed in order to help speed up the turnout of raw coal produced. The process is as follows:

- An endloader EN-1 feeds raw coal into the hopper, NH-1.
- From NH-1, the raw coal is moved along the belt conveyor NBC-1 to the screener, NSC-1, where it is sized and distributed accordingly.
- The raw coal that has been deemed too large by NSC-1 is transferred to belt conveyor NBC-2.

- Belt conveyor NBC-2 then transfers the oversized coal onto belt conveyor NBC-3 which dumps the raw coal back onto belt conveyor NBC-1 to be redistributed by NSC-1.
- Raw coal of appropriate size would move from NSC-1 to belt conveyor NBC-4.
- From belt conveyor NBC-4, the raw coal would be transferred onto another belt conveyor, NBC-5, which dumps out into the raw coal stockpile, OS-10.

This process is typically run over a period of 2 days per week for 10 hours per day for 26 weeks of the year.

There are no VOC's or HAP's associated with this source.

The source shall be maintained and operated in accordance with the following equipment and control device information taken from registration application R13-2888:

Equipment ID No.	A M R ¹	Date of Manu- facture	Description	Maximum Capacity		Control Equip- ment ²	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equipment ²
Raw Coal Circuit									
NH-1	A	2005	Hopper - receives raw coal from endloader and transfers to belt conveyor NBC-1	300	300,000	PE	B A	PT-1 PT-2	TC-PE TC-PE
NBC-1	A	2005	Belt Conveyor - receives raw coal from hopper NH-1 and transfers to screen NSC-1	300	300,000	N	B A	PT-2 PT-3	TC-PE TC-PE
NSC-1	A	2005	Single Deck Raw Coal Screen - receives raw coal from screen feed conveyor NBC-1. Oversize coal (>6"X1/2") exits onto NBC-2. Screened coal (<6" X 1/2") transfers to belt conveyor NBC-4	300	300,000	PE	B A A	PT-3 PT-4 PT-7	TC-PE TC-PE TC-PE
NBC-2	A	2005	Reject Conveyor - receives oversize coal (>6" X ½") from screen NSC-1 and transfers to reject conveyor NBC-3	300	300,000	N	B A	PT-4 PT-5	TC-PE TC-N
NBC-3	A	2005	Reject Conveyor - receives oversize coal (>6" X ½") from reject conveyor NBC-2 and transfers back onto belt conveyor NBC-1	300	300,000	N	B A	PT-5 PT-6	TC-N TC-N
NBC-4	A	2005	Belt Conveyor - receives screened coal (<6" X 1/2") from screen NSC-1 and transfers to belt conveyor NBC-5	300	300,000	N	B A	PT-7 PT-8	TC-PE TC-N
NBC-5	A	2005	Belt Conveyor - receives screened coal (<6" X 1/2") from belt conveyor NBC-4 and transfers to screened coal stockpile OS-10	300	300,000	N	B A	PT-8 PT-9	TC-N LO-PE
OS-10	A	2005	6,000 Ton Screened Coal Stockpile - receives screened coal (<6" X 1/2") from screen NSC-1. Coal is loaded out for further processing by endloader	----	300,000	MC	B	PT-9	LO-PE

¹ A - Addition; M - Modification; R - Removal (Existing unmodified equipment to be included in the permit is labeled with an M.)

² PE - Partial Enclosure; N - None; MC - Moisture Content; TC-N - Transfer Point No Control; TC-PE - Transfer Point Partially Enclosed; LO-PE - Loadout Partially Enclosed

SITE INSPECTION

Mike Kolb of the DAQ's Compliance and Enforcement Section performed an unannounced site inspection on June 14, 2011. The facility will not be sited on compliance for the stand alone screening unit since the application for permit was received by DAQ prior to his inspection.

Directions as given in application: Take Route 3 to Whitesville. Turn on Blue Pennant Road. Travel 1 mile to guard shack. Travel 6 miles further to facility site.

DESCRIPTION OF FUGITIVE EMISSIONS

Potential sources of fugitive particulate emissions for this facility include emissions that are not captured by pollution control equipment, emissions from open stockpiles and vehicular traffic on paved and unpaved haulroads and work areas. The haulroads, stockpiles and work areas will be controlled by water sprays and by water truck. The water truck will be operated on a regular basis, depending on weather conditions and the operating schedule for the facility.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, storage piles and unpaved haulroads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The estimated emission calculations were performed by the applicant's consultant and were checked for accuracy and completeness by the writer.

The proposed *after-the-fact* construction of a portable coal processing facility will result in an estimated total potential to discharge controlled emissions of 17.96 pounds per hour and 14.95 tons per year of PM (particulate matter), of which 8.20 pounds per hour and 5.80 tons per year will be PM₁₀ (particulate matter less than 10 microns in diameter). Progress Coal Companys' proposed construction of a coal processing facility will result in the following estimated potential to discharge controlled emissions:

<u>Emissions Summary -</u> <i>Progress Coal Company</i> <i>R13-2888</i>	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.20	0.85	0.09	0.40
Unpaved Haulroad Emissions	1.34	5.89	0.35	1.52
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>1.54</i>	<i>6.74</i>	<i>0.44</i>	<i>1.92</i>
Point Source Emissions				
Equipment Emissions	15.00	7.50	7.09	3.55
Transfer Point Emissions	1.42	0.71	0.67	0.34
Point Source Emissions Total (PTE)	<i>16.42</i>	<i>8.21</i>	<i>7.77</i>	<i>3.88</i>
FACILITY EMISSIONS TOTAL	17.96	14.95	8.20	5.80

The applicants published notice states the applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

PM	-	16.78 TPY
PM ₁₀	-	6.73 TPY

PM and PM₁₀ were published incorrectly in the applicants notice. Since this application is for permit to construct, DAQ is required to publish a notice of intent to approve and will publish the correct values for PM and PM₁₀ as:

PM	-	14.95 TPY
PM ₁₀	-	5.80 TPY

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed facility. The proposed construction of a coal processing facility will be subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants and Coal Handling Operations

The facility will be subject to the requirements of 45CSR5 because it will meet the definition of "Handling Operation" found in subsection 45CSR5.2.14. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed within application R13-2888 and any amendments thereto are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed construction is subject to the requirements of 45CSR13 because it will result in a potential to discharge controlled emissions greater than six (6) pounds per hour and ten (10) tons per year, and 144 pounds per day of a regulated air pollutant (PM and PM₁₀). The applicant submitted the proper \$1000 application fee and \$1000 NSPS fee and published a Class I legal advertisement in the *Coal Valley News* on June 15, 2011.

45CSR16 Standards of Performance for New Stationary Sources

40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This facility will be subject to 40 CFR 60 Subpart Y because it will have been constructed after October 24, 1974 and will process more than 200 tons of coal per day. The proposed construction of a coal processing facility will include one (1) single deck screen, five (5) belt conveyors, one (1) open stockpile, and one (1) hopper which include

the equipment used in the loading, unloading and conveying operations of the affected facility, constructed, reconstructed or modified after May 27, 2009 in 40 CFR 60 Subpart Y. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation. Therefore, the proposed construction is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation and Processing Plants. The facility must submit a fugitive coal dust emissions control plan as required by 40CFR§60.254(c)(2) after permit issuance.

45CSR30 Requirements for Operating Permits

The facility's potential to emit will be 4.28 TPY of a regulated air pollutant (PM₁₀), not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY for a major source. However, the facility is subject to 40 CFR 60 Subpart Y. Therefore, the facility is still subject to 45CSR30 and classified as a Title V deferred non-major source.

The proposed construction of a coal processing facility will not be subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the proposed coal processing facility is not listed in Table 1. The facility will have the potential to emit 9.06 TPY of a regulated air pollutant (PM), not including fugitive emissions from haulroads, which is less than the 45CSR14 threshold of 250 TPY. This facility is not listed in Table 2, and so fugitive emissions are not included when determining source applicability. Therefore, the proposed construction is not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility are PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and proposed location of this facility. This facility will be located in Boone County, WV, which is currently in attainment for PM (particulate matter), PM₁₀ (particulate matter less than 10 microns in diameter) and PM_{2.5} (particulate matter less than 2.5 microns in diameter).

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily and monthly records. An example form is included as Appendix A to Permit R13-2888. Example form for tracking the amount of water applied through the water truck are included as Appendix B to Permit R13-2888. An example form for the Monthly Opacity Testing is included as Appendix C to Permit R13-2888. The Certification Of Data Accuracy statement shall be completed within fifteen (15) days of the end of the reporting period. These records shall be maintained on site by the permittee for at least five (5) years and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

RECOMMENDATION TO DIRECTOR

The information contained in this construction permit application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No public comments were received. Therefore, the granting of a permit to Progress Coal Company for the construction of their facility located in Whitesville, Boone County, WV is hereby recommended.

Thornton E. Martin Jr.,
Permit Engineer

July 11, 2011

Date